



## An annotated checklist of Echinodermata of Montenegro (the south Adriatic Sea)

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### Abstract

Published literature on the echinoderms of Montenegro (the south Adriatic Sea) is still very scarce. As a baseline for future studies that will enhance the knowledge of this fauna, we have compiled a checklist combining the existing published data with original data from a recent research. The checklist of the echinoderm fauna of the Montenegrin part of the south Adriatic Sea includes 57 species, grouped into 39 genera and 30 families, of which one crinoid (Crinoidea), 18 asteroids (Asteroidea), 9 ophiuroids (Ophiuroidea), 15 echinoids (Echinoidea), and 14 holothurians (Holothuroidea), which makes 56.4% of the species recorded so far in the Adriatic Sea, and 37.0% of the current total number of Mediterranean echinoderms. Ten recorded species are Mediterranean endemics, and two are Mediterranean subendemics. Six species are new for the fauna of Montenegro.

**Key words:** Echinoderms, checklist, new records, Adriatic Sea, Montenegro

### Introduction

The first data on echinoderms in the Adriatic Sea date two centuries ago (Olivi 1792). Since then, this fauna has been studied by a number of authors, but most of these studies are either general faunal works or papers about the echinoderm fauna from the central and north Adriatic (Grube 1840, 1861, 1864; Lorenz 1863; Heller 1868; Marenzeller 1874, 1875; Brusina 1908; Vatova 1928, 1935, 1949, 1950; Kolosváry 1937; Zavodnik 1960, 1961, 1964, 1969, 1972a, 1972b, 1977, 1997, 2003; Riedl 1963; Tortonese 1965; Vidović-Matvejev 1978; Despalatović 2005; Zavodnik *et al.* 2005, 2006), while the south part remained insufficiently explored and available data are still scarce (Babić 1913; Kolosváry 1938, 1940; Bruno 1972; Milojević 1979, 1982, 1984, 1986; Ungaro 1995). Some notes on echinoderms from that area were found in papers dealing with benthic communities from the Bay of Kotor and/or the open sea of the south Adriatic (Gamulin-Brida 1963, 1983; Karaman & Gamulin-Brida 1970; Stjepčević & Parenzan 1980; Radović *et al.* 2004).

With the aim to deepen our knowledge about species diversity of the south Adriatic continental shelf that belongs to Montenegro, a research of echinoderm fauna was performed in the period 2005-2007. The obtained results and literature data were used to prepare a checklist of echinoderms for the Montenegrin part of the south Adriatic.

### Material and methods

Material was collected by SCUBA diving from 12 transects and 16 randomly chosen locations on the south Adriatic continental shelf, inside the Bay of Kotor and in the open sea, while additional 7 sites were sampled